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How This Billionaire-Backed Crypto Startup Gets Paid To Not Mine Bitcoin



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[Energy](#)



Texas turbines. GETTY

It's everyone's dream to get paid to do nothing. Bitcoin miner Layer1 is turning that dream into reality — having figured out how to make money even when its machines are turned off.

Layer1 is a cryptocurrency startup backed by the likes of billionaire [Peter Thiel](#). In recent months, out in the hardscrabble land of west Texas, [the](#)

company has been busy erecting steel boxes (think shipping containers) stuffed chockablock with high-end processors submerged inside cooling baths of mineral oil. Why west Texas? Because thanks to a glut of natural gas and a forest of wind turbines, power there is among the cheapest in the world — which is what you need for crypto.

“Mining Bitcoin is about converting electricity into money,” says Alex Liegl, CEO and co-founder. By this fall Layer1 will have dozens of these boxes churning around the clock to transform 100 megawatts into a stream of Bitcoin. Liegl says their average cost of production is about \$1,000 per coin — equating to a 90% profit margin at current BTC price of \$9,100.

So it's odd how excited Liegl is about the prospect of having to shut down his Bitcoin miners this summer.

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Already this year west Texas has seen a string of 100-degree days. But the real heat and humidity don't hit until August, which is when the Texas power grid strains under the load of every air conditioning unit in the state going full blast. During an intense week in 2019, wholesale electricity prices in the grid region managed by the Electricity Reliability Council of Texas (ERCOT) soared from about \$120 per megawatt-hour to peak out at \$9,000 per mwh. It was only the third time in history that Texas power hit that level. And although the peak pricing only lasted an hour or so, that's enough to generate big profits. Analyst Hugh Wynne at research outfit SSR figures that Texas power generators make about 15% of annual revenues during the peak 1% of hours (whereas in more temperate California grid generators only get 3% of revs from the top 1%).

Turns out that running a phalanx of Bitcoin miners is a great way to arbitrage those peaks. Layer1 has entered into so-called “demand response” contracts whereby at a minute’s notice they will shut down all their machines and instead allow their 100 mw load to flow onto the grid. “We act as an insurance underwriter for the energy grid,” says Liegl, 27. “If there is an insufficiency of supply we can shut down.” The best part, they get paid whether a grid emergency occurs or not. Just for their willingness to shut in Bitcoin production, Layer1 collects an annual premium equating to \$19 per megawatthour of their expected power demand — or about \$17 million. Given Layer1’s roughly \$25 per mwh long-term contracted costs, this gets their all-in power price down 75% to less than 1 cent per kwh (just 10% of what residential customers pay).

It may seem like grid operators are paying Layer1 a lot for something that might not even happen, especially with coronavirus reducing electricity demand, but it makes total sense, says [Ed Hirs](#), a lecturer in energy economics at the University of Houston and research fellow at consultancy BDO: “It’s a lot cheaper option than building a whole new power plant or battery system just to keep it on standby.”



Alex Liegl. COURTESY LAYER1

And although this may be a new concept for cryptocurrency miners, it’s been done before. Two decades ago industrialist Charles Hurwitz bought up power-hogging aluminum smelters in the Pacific Northwest and [made more money reselling electricity](#) than making metal. “It used to be called load management,” says Dan Delurey, a consultant with [Wedgemere Group](#). “In old commercial buildings you might still find telephone wires connected to air conditioning systems so that grid operators could send a signal to shut off.” More recently we’ve seen companies install radio-based devices to control hot water heaters and lighting systems. Indeed, grid management is

a hot enough area that in 2017 Italy's power giant Enel bought Boston-based Enernoc for \$250 million and Itron ITRI bought Comverge for \$100 million. What's emerged are entities, like Layer1, that Delurey calls the "prosumer" — producing consumer.

As for Layer1, Liegl says his next step is to vertically integrate into financial products, including Bitcoin derivatives and more. "We are building an in-house energy trading division to leverage this into being a virtual power plant."

His message to any pikers still trying to mine cryptocurrencies from their bedroom PC or even via cloud services: "I can't think of something more irrational at this point. It's like if I wanted to dig a hole in my backyard and try to get oil out of the ground."

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By **Christopher Helman**

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